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UTILIZATION OF ADVANCED IMAGE PROCESSING ALGORITHMS IN COMPUTER CONTROLLED DIGITAL MEASUREMENT DEVICES CALIBRATION STAND

ABSTRACT *Digital measurement devices are still growing fraction of wide spectra of the measurement tools utilized in various disciplines of science and technology. Although many of such devices are equipped with advanced digital circuits, they have no digital interfaces. Therefore realization of the automated calibration process is impossible, and performing laborious and time-consuming comparison procedure of the standard and tested devices readouts is necessary. This issue can be solved by utilization of the automated calibration system equipped with the optical character recognition (OCR) feature, which will allow to perform the readouts without involvement of the human. In this work we present the computer-based readout recognition system for digital measurement instruments. Performed tests allowed to evaluate the quality of the recognition process and to confirm the effectiveness of developed solution as an alternative for the processes performed by the employees of the calibration laboratories.*

Keywords: *calibration, image processing, metrology.*